

CLAIMS

1. An apparatus for acquiring and reading optical codes, comprising:

- means for acquiring the optical code, having at least one acquisition light source,
- means for reading the acquired optical code, and
- means for visually indicating the reading result,

characterised in that said visual indication means comprises:

- at least one indication light source, distinct from or coinciding with, the at least one acquisition light source of said acquisition means,
- means for imposing an information content indicating the reading result to the light emitted by said at least one indication light source, and
- means for projecting the light, having the imposed information content, substantially at the optical code.

2. Apparatus according to claim 1, characterised in that said means for reading the optical code comprises means for communicating the acquired code to a remote processing unit and for receiving the reading result therefrom.

3. Apparatus according to claim 1 ~~or 2~~, characterised in that said means for imposing the information content comprises a switch for turning on and off said at least one indication light source.

4. Apparatus according to claim 1 ~~or 2~~, characterised in that said means for imposing the information content comprises at least one element for selectively transmitting the light generated by the at least one indication light source.

5. Apparatus according to claim 4, characterised in that said selective transmission element is selected from the group comprised of a diffractive element, a diaphragm having a predetermined shape, a slide, a reflecting surface

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having a predetermined shape and a shutter.

6. Apparatus according to claim 4, characterised in that said selective transmission element is selected from the group comprised of a diffractive element and a hologram.

5 7. Apparatus according to claim 1 ~~or 2~~, characterised in that said means for imposing the information content comprises a driving circuit of said at least one light source.

10 8. Apparatus according to claim 7, characterised in that said driving circuit is suitable to drive said at least one indication light source also in such an operating condition that said at least one indication light source is said acquisition light source during the acquisition of the optical code.

15 9. Apparatus according to claim 7 ~~or 8~~, characterised in that said at least one indication light source is a light source capable of emitting light of at least two chromatic components, and said driving circuit is suitable to drive said at least one indication light source so as to generate
20 each time light of one or more of said chromatic components.

A 10. Apparatus according to claim 7 ~~or 8~~, characterised in that said driving circuit is suitable to switch on said at least one indication light source at least intermittently.

A 25 11. Apparatus according to claim 7 ~~or 8~~, characterised in that said driving circuit is suitable to modulate the intensity of said at least one indication light source.

A 30 12. Apparatus according to ~~any one of the preceding claims~~, characterised in that said means for projecting the light comprises at least one converging lens for collimating the light and focusing it substantially at the optical code.

A 13. Apparatus according to ~~one or more of the preceding~~ ^{claim 1}

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14. Apparatus according to ~~one or more of claims 1 - 12,~~
characterised in that said means for projecting the light
is comprised of the receiving optics of said acquisition
means.

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claim 1

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18. Method for acquiring and reading optical codes comprising the steps of:

characterised in that said indication step (b) is carried out by generating at least a luminous information substantially at the optical code.

19. Method according to claim 18, characterised by the step (c) of discriminating the result of said reading step (a) and in that said indication step (b) is carried out by

generating a predetermined luminous information associated to the particular result discriminated in step (c).

20. Method according to claim 19, characterised in that said result discrimination step (c) is carried out by
5 discriminating between positive result and negative result.

21. Method according to claim 19, characterised in that said result discrimination step (c) is carried out by discriminating among positive result and at least two different negative results.

10 22. Method according to ^{claim 18} ~~one of claims 18 to 21~~, characterised in that said indication step (b) is carried out only after having repeated said reading step (a) for a predetermined number of times receiving a negative result.

15 23. Method according to ^{claim 19} ~~one of claims 19 to 22~~, characterised in that said predetermined luminous information generated in said indication step (b) is differentiated by hue, shape and/or dynamics of the luminous intensity.

20 24. Method according to ^{claim 18} ~~one of claims 18 to 23~~, characterised in that said indication step (b) is carried out by further generating at least a second luminous information at the optical code acquiring and reading apparatus.

25 25. Method according to claim 24, wherein said luminous information generated substantially at the optical code is turned off before turning off said second luminous information at said optical code reading apparatus.

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